IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	JEFFREY L. HUCKINS	Group Art Unit:	2614
Serial No.:	09/512,226	Examiner:	Michael W. Hoye
Filed:	February 24, 2000		
For:	PROVIDING CONTENT DESCRIPTION AND CONNECTION INFORMATION IN DIGITAL BROADCAST NETWORKS	Atty. Dkt. No.:	INTL-0270-US (P7593)

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF TRANSMITTAL

Dear Sir:

Transmitted herewith in triplicate is the Appeal Brief in this application. The Notice of Appeal was filed on April 29, 2004.

Pursuant to M.P.E.P. § 1208.02, there is no fee due for this Appeal, because the Examiner reopened prosecution after filing of the first Appeal Brief on October 20, 2003. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504.

Respectfully submitted,

Date: June 28, 2004

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Date of Deposit: June 28, 2004
I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as **first class mail** with sufficient postage on the date indicated above and is addressed to the Board of Patent Appeal & Interferences, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Jennifer Juarez

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APPEAL BRIEF

Sir:

Applicant respectfully appeals from the final rejection mailed April 29, 2004.

I. REAL PARTY IN INTEREST

The real party in interest is Intel Corporation, the assignee of the present application by virtue of the assignment recorded at Reel/Frame 010640/0037.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

The application was originally filed with claims 1-30. Claims 1-13 and 26-28 are pending. Claims 1-13 and 26-28 are the subject of this appeal.

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IV. STATUS OF AMENDMENTS

All Amendments previously presented by the Applicant have been entered as of the date of this Appeal.

V. SUMMARY OF THE INVENTION

In one embodiment of the invention, as depicted in FIG. 1, comprises an information delivery system 10, a content creator 12, a transport operator system 14, and a plurality of receivers 16. The receivers 16 may be located at various user receiving sites, including homes, offices, entertainment facilities, or other locations. The content creator 12 may originate ancillary data and television content (or other types of content including audio and/or video data) that is transmitted by the transport operator system 14.

Ancillary data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layouts, electronic content guides and synchronization information. The transport operator system 14 provides an enhanced content delivery infrastructure that may include terrestrial, cable, satellite, or other types of transmission facilities (either analog or digital). The audio/video content and ancillary data may be transmitted over a transport medium 22, which may be a terrestrial, cable, satellite, or other type of link, to the receivers 16. The user receivers 16 may include televisions, set-top boxes, personal computers, or other types of systems adapted to receive audio/video content and associated ancillary data. *See* Specification, p. 5.

Announcements may be transmitted either separately from the audio/video content or in conjunction therewith. An announcement may provide information useful for understanding what information has been transmitted and for coordinating information transmitted at different times that relates to different subject matters. Thus, as used herein, the term "announcement" is

merely intended to refer to information other than content that is provided over the broadcast system.

Thus, an announcement may include both connection information and content description information. Content description information is useful to obtain information about the substance of the information that has been transmitted in the content stream. Thus, content description information may be utilized for generating electronic content guides or other displays at the receivers. Connection information provides information about the transport that has been used to provide the information to the receivers. Depending on the service multiplex and transport that is chosen for the particular system, different information may be provided as connection information. *See* Specification, p. 7.

Thus, in one embodiment of the present invention, the audio/video content 24 may be received from a content creator 12 and transmitted by a transport operator over a service multiplex and transport 22 to a plurality of user receivers 16. The transport operator 14 may also transmit, either with that content or separately therefrom, content description information 26 and connection information 28.

Referring to Fig. 2, the transport operator system 14 may include a receiving port 102 to receive audio/video content information from a content creator 12 over a link 24. Content description information 26 and the connection information 28 may be provided to a controller 106 in the transport operator system 14. The controller 106 may operate under control of a software routine 108 (referred to as a transport routine).

The transport operator may receive content description information as indicated at block 26 as well as connection information as indicated at block 28. The content description information, which may be in the form of meta-data, may be part of an announcement stream

such as a data program guide (DPG). The content description provides information about the nature of the audio/video content that is also being transmitted. Thus, the transport system 14 may transmit a separate announcement which includes the content description information. In addition, the transport operator system 14 may provide a separate announcement which includes the connection information 28. The connection information identifies the broadcast network connections that carry one or more of the data components that comprise the content associated with a broadcast session.

As a result, the content description information may be broadcast as a separate announcement well in advance of the actual connection information. In some embodiments of the present invention, by uncoupling these two components of signaling information, the content description may be transmitted before it is known precisely how the connection to the content will actually be implemented. Once the assignment of a connection has been determined, the connection information may be transmitted and linked to the previously transmitted content description. This enables dynamic management of the connection information in the broadcast network. *See* Specification, pp. 8-9.

In one embodiment of the present invention, separate storage media 113 and 115 coupled to the controller 106 may be provided for storing separately the content description information 26 and the connection information 28. In some embodiments of the present invention, a storage for the connection information 28 may be all that is provided. Thus, the connection information may be accumulated for later transmission. In such case, a template or place holder for the connection information may be stored in the storage 115. The template may provide the necessary linking information to link the connection information to the content description information and/or the audio/video content. *See* Specification, p. 11.

Once the two announcement streams have both arrived at a user receiver 16, the streams may be linked to one another. In addition, it may be desirable to link the content description to the identity, such as a television channel number, of a service carrying the content. It may also be desirable to link the content description to a logical connection identifier for each data component of the content, to whatever granularity is desired. As an example, an "item", "group" hierarchy model may be defined in which "items" identify the lowest granularity of data components. The items may be coalesced into "groups". In this example, the connection information may be provided at the group level, item level, or some combination of both. For instance, within any given group, a connection identifier value for "use single group connection" may be used by some of the group items while the remainder of the items specify connections of their own. *See* Specification, p. 12.

The specification of a connection information format may define how to acquire the connection information from a well defined location in the transport stream. Thus, it may be appreciated that the connection information may be provided at a later time, spaced upstream from the associated content description.

Once the content description is acquired from the transport stream, it may be used to point to a specific instance of later received connection information data. The content description and connection information may be managed separately in order to provide the capability to send a content description to the receiver 16 well in advance of knowing (or needing to know) what the connection to the data components of the content are or will be carried on. Thus, the content description may provide an identifier at the group level that "connects" to the content information and an identifier at the item level that "connects" to corresponding information in the connection information.

When the connection information becomes available, the connection information may be developed with appropriate identifiers linking to the identifiers previously provided for the content description, as indicated in block 48. In some cases, a template or place holder that was developed at the same time as the controller developed the content description may be utilized to insert the connection information. Thus, the connection information may simply be snapped into a template that was created with the appropriate identifiers and stored in the storage 115, in one embodiment of the present invention. Thereafter, the connection information may be transmitted to the receiver 16 as indicated in block 50. *See* Specification, pp. 13-15.

VI. ISSUES

A. **Are Claims 1-2 and 9-11 Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.?**

B. **Are Claims 5-8, 13 and 27 Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.?**

C. **Are Claims 26 and 28 Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.?**

D. **Are Claims 3 and 12 Patentable Under 35 U.S.C. §103 Over Arsenault, et al. In View of Yoshinobu, et al.?**

E. **Is Claim 4 Patentable Under 35 U.S.C. §103 Over Arsenault, et al. In View of Yoshinobu, et al.?**

VII. GROUPING OF THE CLAIMS

For purposes of this appeal, the claims do not stand or fall together. For purposes of this appeal, Applicant has grouped together claims 1-2 and 9-11; claims 5-8, 13 and 27; claims 26 and 28; and claims 3 and 12, as set forth above.

VIII. ARGUMENT

A. Claims 1-2 and 9-11 Are Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.

Claim 1 is a method in which there is transmitted (i) content, (ii) a first announcement including connection information for the content, and (iii) a second announcement including a

content description for the content. As recited by claim 1, the second announcement is transmitted before any assignment of connection has been determined for the content. Claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by European Application EP 828390 (Arsenault, et al.). This rejection is improper.

In this regard, Arsenault does not disclose transmitting a second announcement including a content description before any assignment of connection has been determined for the content. That is, Arsenault does not disclose transmitting a program guide or program information 96 (contended by the Examiner to meet the "content description") before any assignment of connection has been determined for the content. Instead, as shown in FIG. 7 and described in Arsenault, the program information 96 includes assignment connection information, such as outputs and broadcast resources, as well as map information. Arsenault, col. 25, lns. 18-56.

Further, there is no disclosure anywhere in Arsenault that a content description is transmitted before any assignment of connection has been determined for the content. This is especially so, as Arsenault teaches that an uplink facility 10 "must" allocate incoming video content to broadcast resources. Arsenault, col. 13, lns. 35-40. Thus, Arsenault merely teaches the conventional manner of configuring a map at the uplink facility 10 which associates input data streams to broadcast resources and then transmitting data streams along with program information after a connection has been assigned. Thus for at least this reason, claim 1 and claims 2 and 9 depending therefrom are patentable. For the same reasons, claims 10-11 are patentable and the rejection should be reversed.

B. Claims 5-8, 13 and 27 Are Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.

Claims 5-8 depend from claim 1 and are, for at least the reasons advanced above with respect to claim 1, likewise patentable over Arsenault, et al. Claim 5 further recites providing an identifier with the second announcement (content description) that is used to link with the first

announcement (connection information). Claim 5 similarly stands rejected under §102(b) over Arsenault.

With respect to this basis for the rejection of claim 5, the Examiner erroneously relies on the map select ID 98 of Figure 7 of Arsenault, et al. (described in col. 25, line 18 through col. 26, line 2). In this regard, the Examiner asserts, without support, that "map service [sic] identifiers 98...link the description to the connection." Final Office Action, p. 5. Such is simply not the case, as the only functionality attributed by Arsenault, et al. to the map select ID 98 is that "[w]here multiple maps and/or submaps are maintained ... a map select identifier 98 may be appended to the map data...." That is, in Arsenault, et al. map select identifiers 98 are used merely to distinguish among maps and/or submaps. The map select identifiers do not serve to link the two announcements, i.e., content description to connection information, as recited by claim 5.

Furthermore, when read in the context of claim 1 from which it depends, it is clear that claim 5 requires that (i) the identifier that links the announcement of connection information to the announcement of content description be included in the announcement of content description, and (ii) that the announcement of content description be transmitted before any assignment of connection. In contrast, Arsenault, et al. establishes that the map select identifier 98 is transmitted *concurrently* with the local map update information. Arsenault at col. 25, lines 41, 42 and Figure 7. That is, map select identifier 98 is *not* transmitted before any connection assignment is determined, as recited by claim 5.

Thus, claim 5 is patentable, and the rejection of claims 5-7 should be reversed. For similar reasons, the rejection of claims 8, 13, and 27 should be reversed.

C. Claims 26 and 28 Are Patentable Under 35 U.S.C. §102(b) Over Arsenault, et al.

Claim 26 recites a system that includes a processor, a transmitter to transmit first and second announcements and video content, where the first announcement includes connection information for the content and the second announcement includes content description for the content; and storage to store a template for the first announcement, where the template is formed before the connection information is available. Claim 26 stands rejected under 35 U.S.C. §102(b) over Arsenault, et al. This rejection is improper.

As to claim 26, nowhere does Arsenault disclose storage "to store a template for said first announcement, said template formed before said connection information is available." In this regard, nowhere does the portion of Arsenault cited by the Examiner teach storage of a template for a first announcement including connection information. That is, the "map information that is provided to the data server for storage" recited by the Examiner (*see* Final Office Action, p. 7) is not a template formed before connection information is available. Arsenault, col. 17, lns. 45-55. Clearly, the map information is not stored until assignment of connection has occurred. That is, as described in Arsenault, the map information 78 provides the correspondence between data (i.e., content) and broadcast resource (i.e., connection information). *Id.* Because there is such correspondence, this information cannot be transmitted until after connection information is available. Accordingly, claim 26 and claim 28 depending therefrom are patentable over Arsenault, and the rejection should be reversed.

D. Claims 3 and 12 Are Patentable Under 35 U.S.C. §103 Over Arsenault, et al. In View of Yoshinobu, et al.

Claim 3 depends from claim 2 and further recites arranging the content description with at least two levels of granularity. Claim 3 stands rejected under 35 U.S.C. §103(a) over

Arsenault, et al. in view of U.S. Patent No. 5,686,954 (Yoshinobu). This rejection is improper, as neither Arsenault nor Yoshinobu teach or suggest a method in which a second announcement including content description is transmitted before any assignment of connection has been determined for the content (*see* VIII.A). For at least this reason claims 3 and 12 are patentable over the proposed combination, and the rejection should be reversed.

E. Claim 4 Is Patentable Under 35 U.S.C. §103 Over Arsenault, et al. In View of Yoshinobu, et al.

Claim 4 is directed to a method in which, *inter alia*: (i) there is transmitted a first announcement that includes connection information for content; (ii) prior to the transmission of the first announcement, there is transmitted a second announcement of a content description that is arranged with at least two levels of granularity; and (iii) each of the levels of content granularity is linked to connection information for the granularity.

Claim 4 stands rejected under 35 U.S.C. §103(a) over Arsenault in view of Yoshinobu. This rejection is improper, at least for the reasons discussed above regarding claims 1 and 3 from which claim 4 depends (*see* VIII. A and D).

Dependent claim 4 is further patentable as neither Yoshinobu nor (as conceded by the Examiner) Arsenault teaches or suggests linking each of two levels of granularity to connection information for the granularity. In this regard Yoshinobu only teaches levels of granularity for content description, not connection information, and Arsenault does not teach levels of granularity whatsoever. Thus for this further reason, claim 4 patentably distinguishes over the proposed combination, and the rejection should be reversed.

IX. CONCLUSION

Since the rejections of the claims are baseless, they should be reversed.

Respectfully submitted,

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APPENDIX OF CLAIMS

The claims on appeal are:

1. A method comprising;

transmitting content;

transmitting a first announcement including connection information for said content; and

transmitting a second announcement including a content description for said content, said second announcement transmitted before any assignment of connection has been determined for said content.

2. The method of claim 1 including transmitting said first announcement after transmitting the second announcement.

3. The method of claim 2 including arranging said content description with at least two levels of granularity.

4. The method of claim 3 including linking each of said granularity levels to connection information for said granularity.

5. The method of claim 1 further including providing a service identifier with said second announcement to link with said first announcement.

6. The method of claim 5 including specifying the location of service in said connection information.

7. The method of claim 6 further including transmitting ancillary information with said content.

8. The method of claim 2 further including providing an identifier to link said first and second announcements.

9. The method of claim 1 wherein transmitting said connection information includes transmitting a data program guide.

10. An article comprising a medium for storing instructions that cause a processor-based system to:

transmit content;

transmit a first announcement including connection information for said content; and

transmit a second announcement including a content description for said content, said second announcement transmitted before any assignment of connection has been determined for said content.

11. The article of claim 10 further storing instructions that cause a processor-based system to transmit said first announcement after transmitting said second announcement.

12. The article of claim 11 further storing instructions that cause a processor-based system to arrange said content description with at least two levels of regularity.

13. The article of claim 11 further storing instructions that cause a processor-based system to provide an identifier to link said first and second announcements.

26. A processor-based system comprising:

a processor;

a transmitter coupled to said processor to transmit a first and second announcement and video content, said first announcement including connection information for said content and said second announcement including a content description for said content; and

storage coupled to said processor to store a template for said first announcement, said template formed before said connection information is available.

27. The system of claim 26 wherein said transmitter transmits an identifier that may be used to link said first and second announcements.

28. The system of claim 26 wherein said transmitter transmits said second announcement before said first announcement.